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ABSTRACT

Nomological studies have most often been conducted between networks rather than within networks of variables. To continue the series of within-network nomological research into the construct of self-concept, different self-scales descriptive of academic settings were completed by 1.852 students in grades one through twelve. The students seemed fairly discriminating about the pictures they held of themselves in various contexts, although older students had shaped their self concepts more distinctly. The results continue to suggest a theoretical framework for the construct of self, which is neither unitary nor hierarchical, but rather multidimensional in an individualized patterning of experience with the possibility of earlier self-conceptualization than previously evidenced. (Author/JAC)

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THE FACTOR DIFFERENTIAL IN SELF-CONCEPT ANALYSIS

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Abstract

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The present study was conducted to continue the series of within-network nomological research into the construct of self concept. Different self scales descriptive of academic settings were administered to 1,852 students in grades one through twelve. Previous results had indicated high internal consistency and convergent validity. Discriminant analysis and factor analysis in the present study yielded discriminant validity, clearly differentiated scale-clusters, and a demarcation between the lower grades and the upper grades. The results continue to suggest a theoretical framework for the construct of self which is neither unitary nor hierarchical, but rather multidimensional in an individualized patterning of experience with the possibility of earlier self-conceptualization than previously evidenced.

The Factor Differential in Self-Concept Analysis

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The purpose of the study was to continue the search into the dimensions of the construct of self. Nomological studies have more often been conducted between networks rather than within networks of variables. The latter type is more difficult to carry out, of course, partly because of the greater complexity of the self and its resistance to compartmentalization. Yet, the self concept requires definition and clarification by way of within-network studies before proceeding to intervariable research, as Wylie has consistently asserted (1974). In addition, different abilities loosely grouped under the term, "self concept," should be more systematically identified, sorted, and categorized, in an effort to minimize intra-individual variation.

Those studies which have been conducted into the internal dimensions of the self have tended to describe the self concept as unitary (cf., Rosenberg & Simmons, 1973) or hierarchical (Shavelson, Hubner, & Stanton, 1976). Such studies fall short, however, since the self possesses greater complexity than either of these theoretical positions allows and continually indicates resistance to compartmentalization. Another position has been previously advanced in terms of a taxonomic paradigm with a cognitive-processing thrust (Soares & Soares, 1977, 1980b).

The present study was therefore designed to refine the process of measuring self-perceptions by demonstrating the age differential in both

construct and discriminant validity and by formulating a more realistic thesis for probing the construct of self.

Methods

A total sample of 1,852 subjects was selected randomly from twelve grades in a northeastern, suburban school district, with a minimum of 150 students per grade. The subjects were administered a semantic differential instrument--The Affective Perception Inventory (Soares & Soares, 1980a)--which measures various dimensions of self concept in an academic setting. The API utilizes a forced-choice format of four spaces of distance between pairs of sentences possessing dichotomous traits. The four scales submitted to analysis were: (1) Self Concept as a person; (2) Self Concept as a student; (3) Concept of Self in Language Arts (or English or Reading, depending upon the grade level); and (4) Concept of Self in Mathematics or Arithmetic. The scores were submitted to factor analysis, accompanied by a Varimax rotated factor matrix, for scale and age, and also treated to discriminant analysis, with the discriminant functions of the scales being first derived. Then the analysis and classification techniques were generated, as suggested elsewhere (Cacoullos, 1973; Lachenbruch, 1975), for grade comparisons.

Results

Figure 1 illustrates the relative positions of the twelve-grade centroids (mean vectors). The percentage of grouped cases correctly classified was 72.21% for the grades and

86.4% for gender. Table 1 provides a summary of the monotrait-monomethod coefficients (reliability indicators) for self-perceptions in grade clusters. Table 2 summarizes the hetero-trait-heteromethod coefficients for self-perceptions in the same clusters.

For all age levels, the number of factors generated for the Person Self and the Student Self was greater than for the Language Arts or the Mathematics Self. The highest factor loadings were found with the high school students in comparison to the students in the middle grades or in the primary grades. The lowest factor loadings were found among the primary grade students. The percent of variance accounted for by Factor I was the smallest among the youngest students with the Person Self scale; the largest, among the oldest students with the Mathematics Self scale. These are noted in Table 3.

Conclusions

The students, regardless of age, seemed to fairly discriminating about the pictures they hold of themselves in a variety of contexts. Of course, the older students have shaped their self concepts more distinctly than the younger ones, but the latter are seemingly more differentiating than might generally be supposed.

As Loevinger (1966) has indicated, the ability to form a self concept increased with age and education. As the ability to do so develops, the organism gradually forms a somewhat stereotyped, conventional, and socially acceptable concept of

itself. With increasing maturity, the organism moves from such a predictable concept of self to one which is more differentiated and, perhaps, more realistic. The results of the present study tend to support some of Loevinger's theoretical foundation, as briefly outlined above, but not completely. The present research suggests that the process of self-conceptualization may begin somewhat earlier than believed and also that the process of individualized differentiation may be evolving at an earlier age than some experts have hypothesized. Obviously, the debate has just begun.

REFERENCES

Cacoullos, T. (Ed.). Discriminant analysis and applications. New York: Academic Press, 1973.

Lachenbruch, P. A. Discriminant analysis. New York: Hafner, 1975.

Loevinger, J. The meaning and measurement of ego development. American Psychologist, 1966, 21, 195-206.

Rosenberg, M., & Simmons, R. G. Black and white self-esteem: The urban school child. Washington, DC: American Sociological Association, 1973.

Shavelson, R. J., Hubner, J. J., & Stanton, C. C. Self concept: Validation of construct interpretations. Review of Educational Research, 1976, 46, 407-441.

Soares, L. M., & Soares, A. T. The self concept: Mini, maxi, multi? New York: Annual Meeting of the American Educational Research Association, 1977.

Soares, A. T., & Soares, L. M. The Affective Perception Inventory (API): Composite Test Manual. Trumbull, CT: SOARES Associates, 1980a.

Soares, L. M., & Soares, A. T. A multitrait-multimethod matrix pf self concepts in educational settings. Montreal, Quebec, Canada: Annual Convention of the American Psychological Association, 1980b.

Wylie, R. C. The self concept. (Vol. I). Lincoln, Nebraska: University of Nebraska Press, 1974.

Figure 1

Separation of Grade Centroids

and

Approximate Centours in Reduced Space

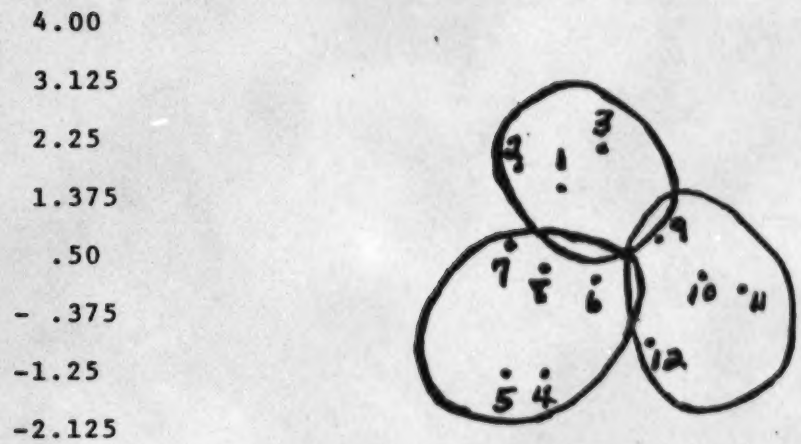

Table 1

A Summary of Monotrait-Monomethod Coefficients for Self-Perceptions in Grade Clusters

Grade Cluster	Max	Min	Median
1-3	.88	.40	.56
4-6	.96	.75	.91
7-9	.97	.89	.93
10-12	.98	.91	.96

Table 2

A Summary of Heterotrait-Monomethod Coefficients for Self-Perceptions in Grade Cluster Comparisons

Grade Cluster	Max	Min	Median
1-3	.66	.60	.51
4-6	.51	.37	.47
7-9	.43	.31	.38
10-12	.43	.33	.40

Table 3

Summary of Factor Loadings

Age° Level	Scale*	Number of Factors	High	Low	Median	Eigenvalue (Factor I)	Percent of Varianc (Factor I only)
A	1	7	.78	.34	.54	7.44	54.8
	2	6	.99	.29	.54	7.54	52.3
	3	5	.83	.24	.55	6.30	51.3
	4	2	.82	.36	.66	9.91	92.1
B	1	7	.74	.12	.34	3.82	48.4
	2	6	.76	.18	.42	4.10	46.1
	3	4	.84	.24	.45	6.06	59.9
	4	3	.78	.19	.56	4.38	71.5
C	1	7	.67	.12	.47	3.37	37.4
	2	3	.80	.19	.43	3.65	69.4
	3	3	.89	.10	.37	3.02	64.8
	4	4	.87	.12	.52	3.26	51.9

CODE:

° A: High School
B: Middle Grades
C: Primary Grades

* 1: Self Concept as a Person
2: Self Concept as a Student
3: Self in Language Arts
4: Self in Mathematics